

A New Species of the Genus *Acontosceles* (Coleoptera, Limnichidae) from Laos, with Description of the Genitalia of *A. yorioi* M. SATÔ

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Abstract A new species, *Acontosceles chujoi* sp. nov., is described from Laos. The male and female genitalia of *A. yorioi* M. SATÔ are described. Additional records of *A. yorioi* M. SATÔ and *A. tagalog* SPILMAN are also given.

Introduction

The genus *Acontosceles* CHAMPION, 1924, is a group of very strange limnichid beetles, and represented by three species from India, Philippines (Luzon Is.) and Japan (Iriomote-jima) (SPANGLER *et al.*, 2001). In addition, SPILMAN (1959) reported an unknown species from Mindanao Is. (Philippines).

Recently, we fortunately obtained one species of this genus from a northern part of Laos. After a careful comparison of the specimens with the previously known species, it becomes clear that it is new to science. In the present paper, we are going to describe it as a new species. In addition, male and female genitalia of *Acontosceles yorioi* M. SATÔ known from Japan are described for the first time based on the additional specimens.

The abbreviations for measurement used in the present paper are as follows: PL – length of pronotum; PW – width of pronotum; EL – length of elytra; EW – width of elytra; TL – total length (head to apices of elytra).

The holotype and some paratypes designated in the present paper are deposited in the collection of the National Science Museum, Tokyo (NSMT), and the paratypes are in the Naturhistorisches Museum, Wien (NMW), the Entomological Laboratory, Ehime University, Matsuyama (EUM) and the National Museum of Natural Science, Taichung (NMNS).

Acontosceles chujoi sp. nov.

(Figs. 1 A, B, 2–4)

Description. Male. Body oblong, subparallel-sided, moderately convex above, closely covered with suberect setae throughout, rugosely and strongly shagreened. Coloration of body almost black, with a faint greenish luster on dorsal surface; antennae, maxillary palpi and legs yellowish brown, but the antennal segments VIII–XI, knees and hind tarsi are black.

Head moderate in size, concaved in dorsum; frons convex and provided with long silvery setae. Eyes large, prominent above. Maxillary palpi moderate in length, slender, closely covered with short setae, sparsely punctate; terminal segment rather pointed at apices; approximate ratio of each segment as ($n=1$) 4 : 27 : 26 : 56. Antennae moderate in length, provided with short setae throughout, and with stout extra setae on outer margins of segments VI, IX and X; approximate ratio of each segment as ($n=1$) 10 : 10 : 8 : 7 : 7 : 6 : 7 : 9 : 8 : 8 : 15.

Pronotum transverse, broadest at basal 1/3, depressed lightly above in antero-lateral part; front margin lightly bisinuate; lateral margins arcuate, slightly narrowed posteriorly from basal 1/3, distinctly narrowed anteriorly from basal 1/3; basal margin distinctly bisinuate; PW/PL 2.34–3.83 (2.66). Scutellum small, subtriangular. Elytra oblong, subparallel-sided near base to apical 2/5, thence gently tapered apicad; apical part projecting and abruptly curved ventrad; EL/EW 1.54–1.71 (1.64); EL/PL 4.05–5.37 (4.65); EW/PW 0.69–1.19 (1.09); TL/EW 2.10–2.29 (2.22). Hind tibiae furnished with three spurs on outer margin, almost as long as hind tarsi. Abdominal sternites III–IV sparsely covered with short setae; sternites V–VI closely and evenly covered with short setae; sternite VII broad, trapezoidal, almost straight in apical margin, strongly depressed, closely covered with short setae, with a longitudinal median groove and bearing very long extra setae on lateral portions of median groove. Sternite VIII moderately sclerotized, U-shaped, closely covered with fine furrows and spines in apical part, projecting laterally in basal 1/3. Sternite IX moderately sclerotized, asymmetrical, rather long. Aedeagus long, well sclerotized; basal piece oblong; lateral lobes long and slender, about 0.6 times as long as basal piece, pointed at apices, curved gently dorsad, serrate in lateral part; median lobe relatively long, about 0.7 times as long as lateral lobe, evenly tapered apicad, and pointed at the apex.

Female. Sexual dimorphism of the external feature distinct in the following characteristics: apical part of elytra projecting ventro-apically; abdominal sternite VII subtriangular, rather pointed at the apex, closely covered with short setae, indistinct in median groove, bearing long setae in apical to lateral parts. PW/PL 2.25–2.97 (2.63); EL/EW 1.65–1.76 (1.72); EL/PL 4.33–5.78 (5.19); EW/PW 1.11–1.18 (1.15); TL/EW 2.18–2.30 (2.26). Urosternite moderately sclerotized, with long and slender base; apex with slender lateral projections and rounded apico-medially, the apical portions being covered with minute spines. Ovipositor well sclerotized; coxite pointed at apices; approximate ratio of coxite and baculus as 3.0 : 5.0.

Measurement. Male (n=10): TL 2.12–2.45 (2.36) mm; PW 0.87–1.53 (1.00) mm; PL 0.35–0.40 (0.38) mm; EW 0.95–1.15 (1.07) mm; EL 1.53–1.88 (1.75) mm. Female (n=4): TL 2.40–2.42 (2.41) mm; PW 0.90–0.95 (0.93) mm; PL 0.32–0.40 (0.36) mm; EW 1.05–1.10 (1.06) mm; EL 1.73–1.93 (1.83) mm.

Type material. Holotype (NSMT): Male, Saleui (water fall), Houaphan Prov., Laos, 5–V–2002, H. YOSHITOMI & M. SATÔ legs. Paratypes (NSMT, NMW, EUM, NMNS): 15 males & 6 females, same data as for the holotype (1 male and 1 female dissected and mounted on slides nos. HY 890–893).

Distribution. Laos.

Biological notes. The adults were captured from the splash zone of the rocks near a water fall (Fig. 4).

Remarks. This species is closely related to *Acontosceles yorioi* M. SATÔ, and differs from it in the following characters: body size large; lateral margin of elytra less arcuate; aedeagus long and slender.

Etymology. This species is dedicated to the memory of the late Dr. Michio CHÛJÔ who was a leading and eminent coleopterologist in Japan.

Acontosceles yorioi M. SATÔ

(Figs. 1 C, 5)

Acontosceles hydroporoides: SATÔ, 1965, 123 [misidentification]. — SPANGLER *et al.*, 2001, 152 [Taiwan].

Acontosceles yorioi M. SATÔ, 1966, 60.

Description. Male. Abdominal sternite VII broad, semicircular, evenly arcuate in apical margin, with a shallow and indistinct median groove, and provided with long extra setae on lateral portions of the median groove. Sternites VIII–IX as those of *A. chujoi* sp. nov., but the basal margin of sternite VIII projects in mesal part. Aedeagus long, well sclerotized; basal piece rather stout; lateral lobe 0.45 times as long as basal piece; median lobe rather short, 0.71 times as long as lateral lobe.

Female. Closely similar to that of *A. chujoi* sp. nov., but the urosternite and ovipositor are somewhat short.

Specimens examined. 1 male (EUM), Arakawano-taki, near Yonehara, Ishigaki-jima, 2–V–1998, K. ARAI leg.; 2 exs., Ôtomi-rindô, Iriomote-jima, 27–VIII–1989, M. SATÔ leg.; 5 exs. (EUM), Chipon, Taiwan, 18–VIII–1941, H. HASEGAWA leg. (1 female genitalia on slide no. HY 920).

Remarks. SATÔ (1965) recorded *Acontosceles hydroporoides* CHAMPION from for the first time from Taiwan, and then SPANGLER *et al.* (2001) listed Taiwan as the distributional area of this species. However, the specimens reported by SATÔ (1965) do not belong to *A. hydroporoides* but to *A. yorioi* as shown above.

This species is closely related to *Acontosceles tagalog* SPILMAN, but differs from it in the following general appearance: body somewhat large in size; lateral parts of pronotum less depressed above; lateral margins of pronotum more distinctly arcuate;

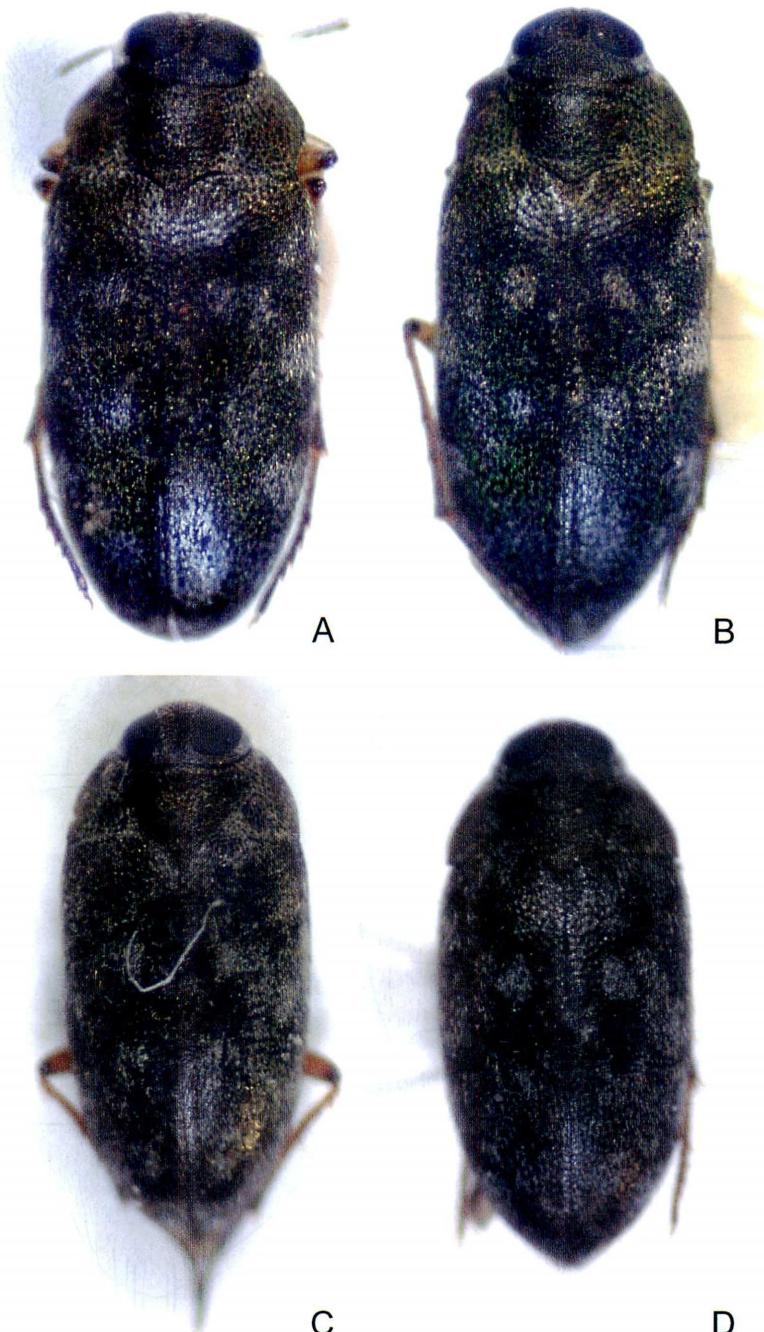


Fig. 1. Habitus of *Acontosceles* spp. —— A, *A. chujoi* sp. nov., male, holotype; B, *A. chujoi* sp. nov., female, paratype; C, *A. yorioi* M. SATÔ; D, *A. tagalog* SPILMAN.

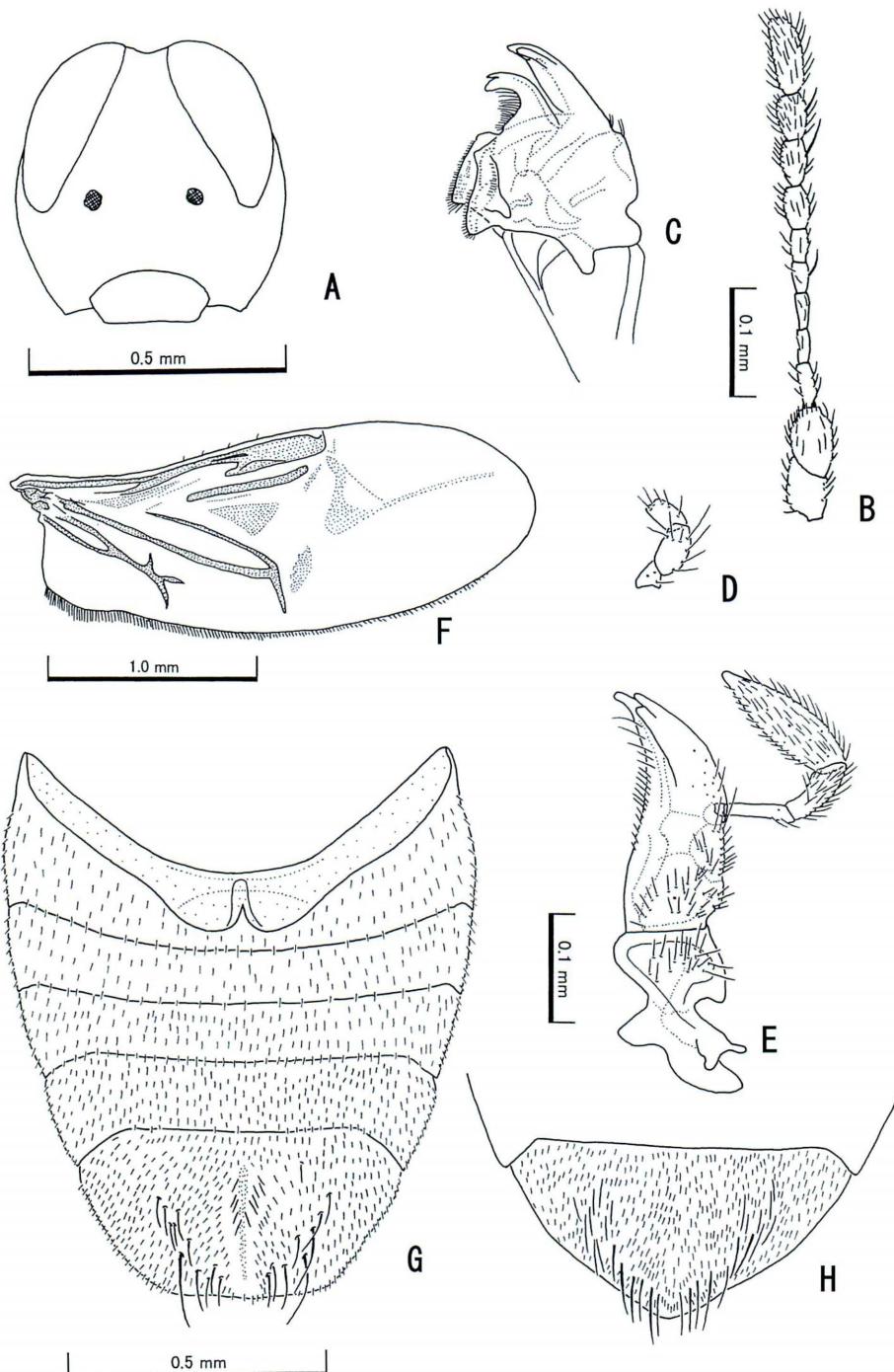


Fig. 2. *Acontosceles chujoi* sp. nov. — A, Head; B, antenna; C, mandible; D, labial palpus; E, maxilla; F, hind wing; G, male abdominal sternites; H, female sternites.

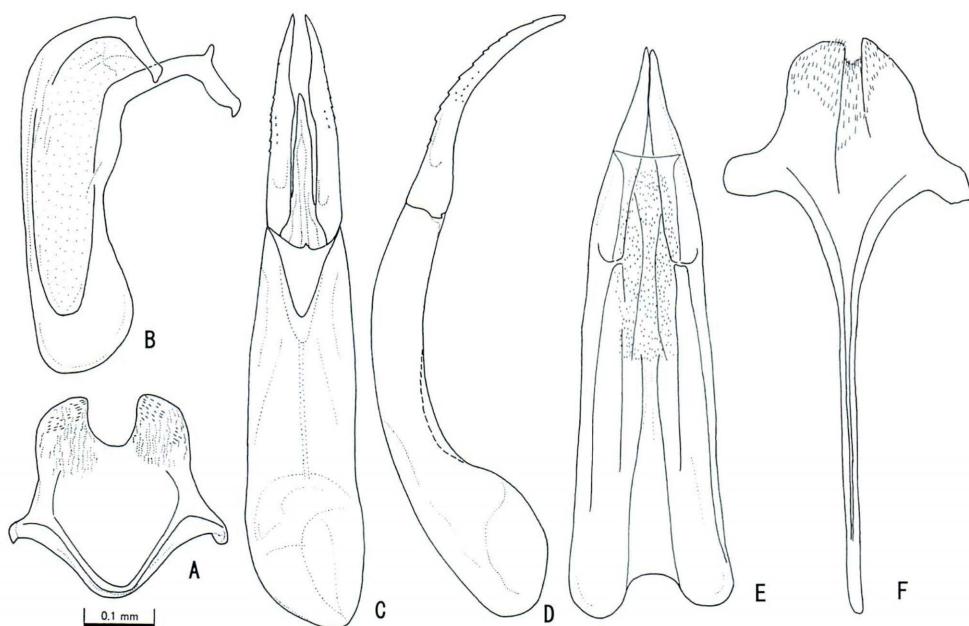


Fig. 3. *Acontosceles chujoii* sp. nov. — A–D: Male; A, sternite VIII; B, sternite IX; C, aedeagus in ventral view; D, aedeagus in lateral view. — E–F: Female; E, ovipositor; F, urosternite.

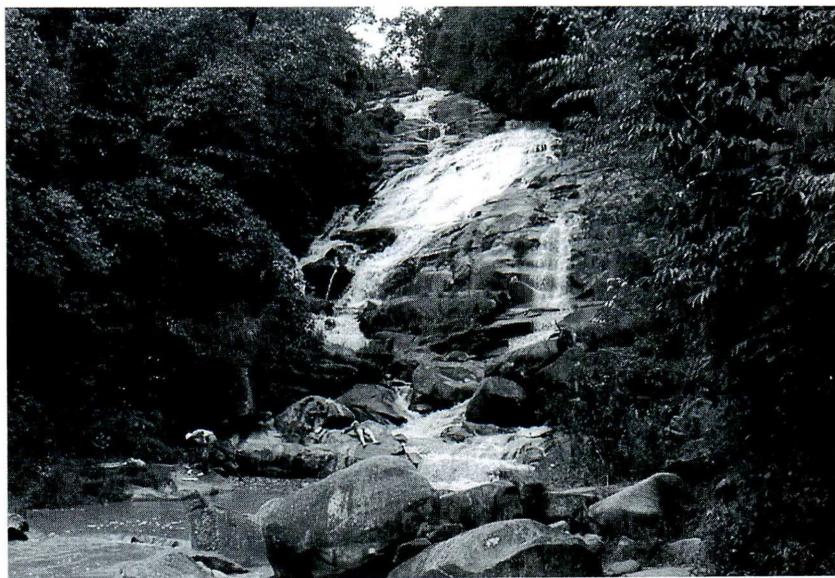


Fig. 4. Habitat of *Acontosceles chujoii* sp. nov., Saleui waterfall, Houaphan Prov., Laos, photo by M. SATÔ, 5-V-2002.

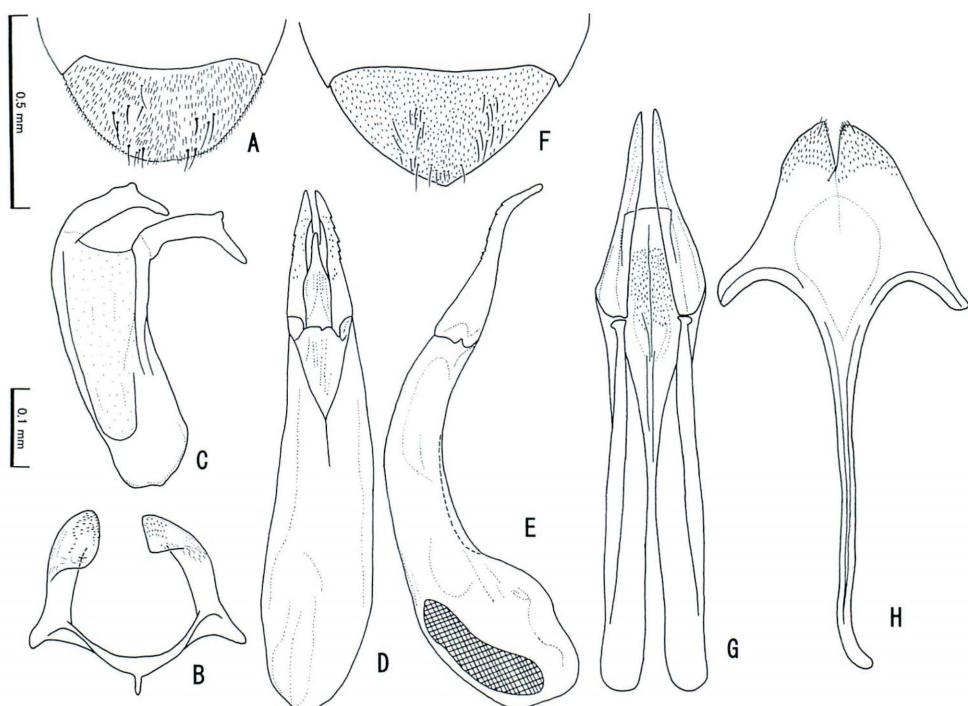


Fig. 5. *Acontosceles yoroi* M. SATÔ. — A–E: Male; A, sternite VII; B, sternite VIII; C, sternite IX; D, aedeagus in ventral view; E, aedeagus in lateral view. F–H: Female; F, sternite VII; G, ovipositor; H, urosternite.

lateral margins of elytra less arcuate; legs rather long.

This is new record to the fauna of Ishigaki-jima and Taiwan.

Distribution. Japan: Ryukyu Isls. (Ishigaki-jima, Iriomote-jima); Taiwan.

Acontosceles tagalog SPILMAN

(Figs. 1D)

Acontosceles tagalog SPILMAN, 1959, 116.

Additional material. 3 exs. (EUM), Los Banos, Laguna Prov., Luzon, Philippines, 17~19-VI-1977, M. SATÔ leg.

Distribution. Philippines (Luzon Is.).

Updated Checklist of the Genus *Acontosceles* from the World

Acontosceles chujoi sp. nov. (Laos)

Acontosceles hydroporoides CHAMPION, 1924, 29. (India)

Acontosceles tagalog SPILMAN, 1959, 116. (Philippines: Luzon)

Acontosceles yorioi M. SATŌ, 1966, 60. (Japan: Ryukyu Isls.; Taiwan)

Acknowledgement

We wish to express our sincere gratitude to Mr. H. WAKAHARA (Laos) and Dr. N. OHBAYASHI (EUM) for their help in the field investigation, and to Dr. M. A. JÄCH (NMW), Dr. A. PÜTZ (Germany), Mr. H. HASEGAWA (Hōya), and Mr. K. ARAI (Saitama) for offering specimens and valuable information.

要 約

吉富博之・佐藤正孝：ラオスからメダカチビドロムシ属 *Acontosceles* の1新種の記載と日本産メダカチビドロムシの交尾器の記載。——ラオスからメダカチビドロムシ属 *Acontosceles* の1新種 *A. chujoi* sp. nov. を記載した。また、日本産のメダカチビドロムシ *A. yorioi* M. SATŌ の交尾器も記載した。

References

CHAMPION, G. C., 1924. On a new subfamily of clavicorn Coleoptera. *Entomologist's month. Mag.*, **60**: 25–29.
SPANGLER, P. J., C. L. STAINES, P. M. SPANGLER, & S. L. STAINES, 2001. A checklist of the Limnichidae and the Lutrochidae (Coleoptera) of the world. *Insecta Mundi*, **15**: 151–165.
SPILMAN, T. J., 1959. A study of the Thaumastodinae, with one new genus and two new species (Limnichidae). *Coleopt. Bull.*, **13**: 111–122.
SATŌ, M., 1965. The limnichid-beetles of Formosa. *Spec. Bull. Lep. Soc. Japan*, (1):121–125.
——— 1966. The limnichid-beetles of Japan. *Trans. Shikoku ent. Soc.*, **9**: 55–62.